

ABSTRACT OF THE DISCLOSURE

A remote sensing device for detecting materials of varying atomic numbers and systems and methods relating thereto. A system for identifying a material includes a photon beam flux monitor for resolving a high-energy beam. A method for identifying a
5 material includes casting an incident photon beam on the material and detecting an emerging photon beam with an array of fission-fragment detectors, a first set of scintillator paddles, and a second set of scintillator paddles.